

REMARKS

Claim 39 has been amended. Claims 1-38 have been cancelled. Thus, claims 39 - 59 are pending in the present application. No new matter has been added. In view of the above noted amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable.

Claims 39-54 and 59 are objected to as containing informalities. Specifically, independent claim 39 is objected to as containing ambiguous language. Claim 39 has been amended to recite “a light emitting portion providing *only ultraviolet (UV) light to tissue*.” It is therefore requested that the objection to claims 39-54 and 54 be withdrawn.

Claims 39 - 51 and 53 - 59 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Mahadevan-Jansen (U.S. Patent. No. 5,842,995) in view of the Anidjar (Publication entitled “Ultraviolet Laser-Induced Autofluorescence Distinction Between Malignant and Normal Urothelial Cells and Tissues” to Anidjar et al.). (See 9/29/2008 Office Action, pp. 2 - 4). The Examiner states, in support of the rejection, that Mahadevan shows the invention substantially as claimed except for the use of a UV light range. To cure this deficiency, the Examiner has referenced Anidjar, which describes the use of laser-induced fluorescence to discriminate tumors from normal surrounding tissue. (See Anidjar, p. 335).

Amended claim 39 recites a tissue spectroscopy device comprising “a spectrometer comprising a distal end, said distal end comprising: *a light emitting portion providing only ultraviolet (UV) light to tissue*, and a light detector; and an interventional device for delivering said spectrometer to a tissue.”

It is respectfully submitted that neither Mahadevan nor Anidjar teach or suggest “a light emitting portion providing *only ultraviolet light* to tissue,” as recited in claim 39. Specifically,

at no point does Anidjar explicitly recite providing light exclusively in the ultraviolet (UV) wavelength spectrum, which, by definition comprises wavelengths of 1 nm. to 400 nm. Rather, Anidjar seeks to apply three wavelengths to a tissue sample: “308 nm for Trp and NADH excitation, 337 nm for NADH excitation, and 480 for flavin excitation.” (See Anidjar, p. 336, ¶ 3). The Examiner has indicated that the Anidjar comprises the necessary components to be capable of transmitting only excitation wavelengths within the UV spectrum. (See 9/29/08 Office Action, p. 5). However, it is respectfully submitted that one skilled in the art would not have been motivated to have modified the device of Anidjar as proposed by the Examiner. Specifically, the results obtained in Anidjar show that the 308 nm excitation wavelength yielded two distinct fluorescent bands at 360 nm and 430 nm while the 337 nm and 480 nm excitation wavelengths yielded one distinct fluorescent band. (See Anidjar, p. 335, Abstract; p. 337, Results). Accordingly, since not all excitation wavelengths fall within the UV range, it is evident that providing only UV excitation wavelengths would not be desirable in light of Anidjar. Rather, it is noted that employing only UV light in the device of Anidjar would counter the intention of the intention of Anidjar to find an optimal fluorescence intensity. (See Anidjar, p. 335, Abstract). Employing fluorescence ratio that is only within the UV spectrum would preclude an optimal fluorescence ratio as taught by Anidjar. It is therefore submitted that neither Anidjar nor Mahadevan provide any motivation to one skilled in the art to utilize “only ultraviolet (UV) light,” as recited in claim 39. Rather, such a modification is contrary to the teaching of Anidjar and is indicative of an improper hindsight reconstruction of the invention.

Furthermore, it is respectfully submitted that one skilled in the art would not have been motivated to apply the in-vitro laser-induced autofluorescence system of Anidjar in an in vivo device as taught by Mahadevan. The Examiner has agreed that Anidjar does not teach an in vivo device and has further indicated that the implication of the presented argument is that only the imaging components and capabilities from Anidjar are being relied upon within the invention of Mahadevan. (See 9/29/08 Office Action, p. 5). However, it is respectfully submitted that one skilled int the art would not have been motivated to employ the in-vitro imaging method as

taught by Anidjar in-vivo. Specifically, the method addressed in Anidjar is only employable *in vitro*, in which Anidjar places the tissue specimen on a quartz plate and subsequently performs autofluorescence imaging on the specimen. (See Anidjar, p. 336, ¶ 6 and Fig. 1, p. 338 ¶ 2, p. 339 ¶ 3). A complete redesign of the device disclosed by Anidjar would be necessary to perform an *in vivo* study as proposed by the Examiner. Nowhere in Anidjar is any direction given toward such a redesign. Thus, it is respectfully submitted that the Examiner's assumption that the method of Anidjar be applied in-vivo to the Mahadevan disclosure would not have been an obvious or feasible modification and rather of the cited references and therefore constitutes an improper hindsight reconstruction of the invention.

Still further, the Examiner has asserted that Mahadevan discloses a spectrometer device comprising "an interventional device for delivering said spectrometer to a tissue," as recited in claim 39, citing the probe casing of Mahadevan. (See 9/28/08 Office Action, p. 5; See Also Mahadevan, col. 6, ll. 22-47). However, it submitted that the cited portion of Mahadevan merely refers to a probe casing which houses probe components such as optical fibers. (See Mahadevan, col. 6, ll. 22-47). It is submitted that, at the most, the probe casing of Mahadevan is directed to teaching a spectrometer. Nowhere in the cited portion or anywhere else in the Mahadevan disclosure is "an interventional device for delivering said spectrometer to a tissue," as recited in claim 39, taught or suggested.

It is respectfully submitted that Mahadevan and Anidjar, taken either alone or in combination, fail to teach or suggest a "tissue spectroscopy device comprising: a spectrometer comprising a distal end, said distal end comprising *a light emitting portion providing only ultraviolet (UV) light to tissue*, and a light detector; and *an interventional device for delivering said spectrometer to a tissue*," as recited in claim 39. Therefore, Applicant submits that claim 39 is allowable for at least the reasons previously mentioned. Because claims 40 - 54 and 59 depend from and, therefore, include the limitations of claim 39, it is respectfully submitted that these claims are also allowable.

Claim 55 recites limitations substantially similar to those of the amended claim 39, including “providing a spectrometer comprising a distal end, said distal end comprising a light emitting portion and a light detector” and “*using an interventional device to deliver said spectrometer to a tissue*” in combination with “connecting said spectrometer to a power source” and “*transmitting only ultraviolet (UV) light through said light emitting portion to illuminate said tissue.*” Thus, it is respectfully submitted that claim 55 is allowable for the same reasons noted above in regard to claim 39. Because claims 56 - 58 depend from and, therefore, include the limitations of claim 55, it is respectfully submitted that these claims are also allowable.

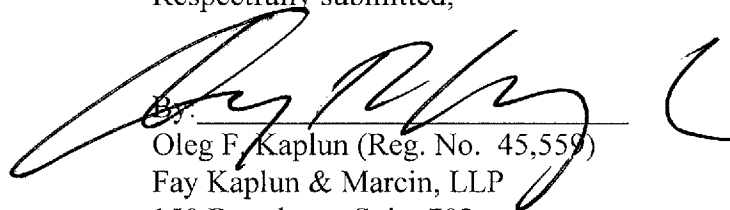
Claim 52 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Mahadevan in view of Anidjar in further view of U.S. Patent No.: 5,503,559 to Vari.

Claim 52 depends from and therefore includes all of the limitations of claim 39. As noted above, Mahadevan and Anidjar, taken alone or in combination, fail to teach or suggest a “tissue spectroscopy device comprising: a spectrometer comprising a distal end, said distal end comprising *a light emitting portion providing only ultraviolet (UV) light to tissue*, and a light detector; and *an interventional device for delivering said spectrometer to a tissue,*” as recited in claim 39. Vari fails to cure the deficiencies of Mahadevan and Anidjar. It is therefore respectfully submitted that claim 39 is allowable over Mahadevan, Anidjar and Vari. Claim 52 is therefore allowable as being dependent on an allowable base claim.

In light of the foregoing, Applicant respectfully submits that all of the presently pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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